



**TECHNICAL UNIVERSITY OF MOMBASA**  

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**FACULTY OF ENGINEERING AND TECHNOLOGY**  
**DEPARTMENT OF MEDICAL ENGINEERING**  
**UNIVERSITY EXAMINATION FOR:**  
**BACHELOR OF SCIENCE IN MEDICAL ENGINEERING**  
**EIT 4150: INRODUCTION TO IT**  
**END OF SEMESTER EXAMINATION**

**SERIES:** Select series 2016

**TIME:** 2 HOURS

**DATE:** Pick Date May 2016

**Instructions to Candidates**

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **FIVE** questions. Attempt question ONE (Compulsory) and any other TWO questions.

**Do not write on the question paper.**

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**Question ONE**

- a) A computer is a system that comprises mainly hardware and software. It processes input data to get information as output. Define fully the following terms: (16 Marks)
- i. "Firmware" and "software"
  - ii. "Input devices" and "Output devices"
  - iii. "Cache memory" and "Registers"
  - iv) "System software" and "Application software"
- b) As a person with knowledge about application software, and assuming that you have been called to advice on the same. Explain three factors that the business should consider so as to buy the most appropriate application packages. (6 Marks)
- c) An Operating System is a set of programs that controls functioning of computer hardware. Explain any four functions of an Operating System of a computer (8 marks)

**Question TWO**

- a) Explain any four components of an operating system (8 Marks)

b) During startup, a computer performs several routines. Discuss the following terms:

i) Power-On-Self-Test (POST)

ii) Cold boot

iii) Basic Input Output System (BIOS)

(12 Marks)

### **Question THREE**

a) Explain the term “Central Processing Unit”

(2 Marks)

b) Explain the major components of the Central Processing Unit

(10 Marks)

c) Explain how the Central Processing Unit uses the four steps of a machine cycle to process data.

(8 Marks)

### **Question FOUR**

For each of the five computer generations, identify the major electronic component and any other one characteristic.

(20 marks)

### **Question FIVE**

Computer can be classified according to Size and Technology. Describe each classification, highlighting the subcategories.

(20 Marks)